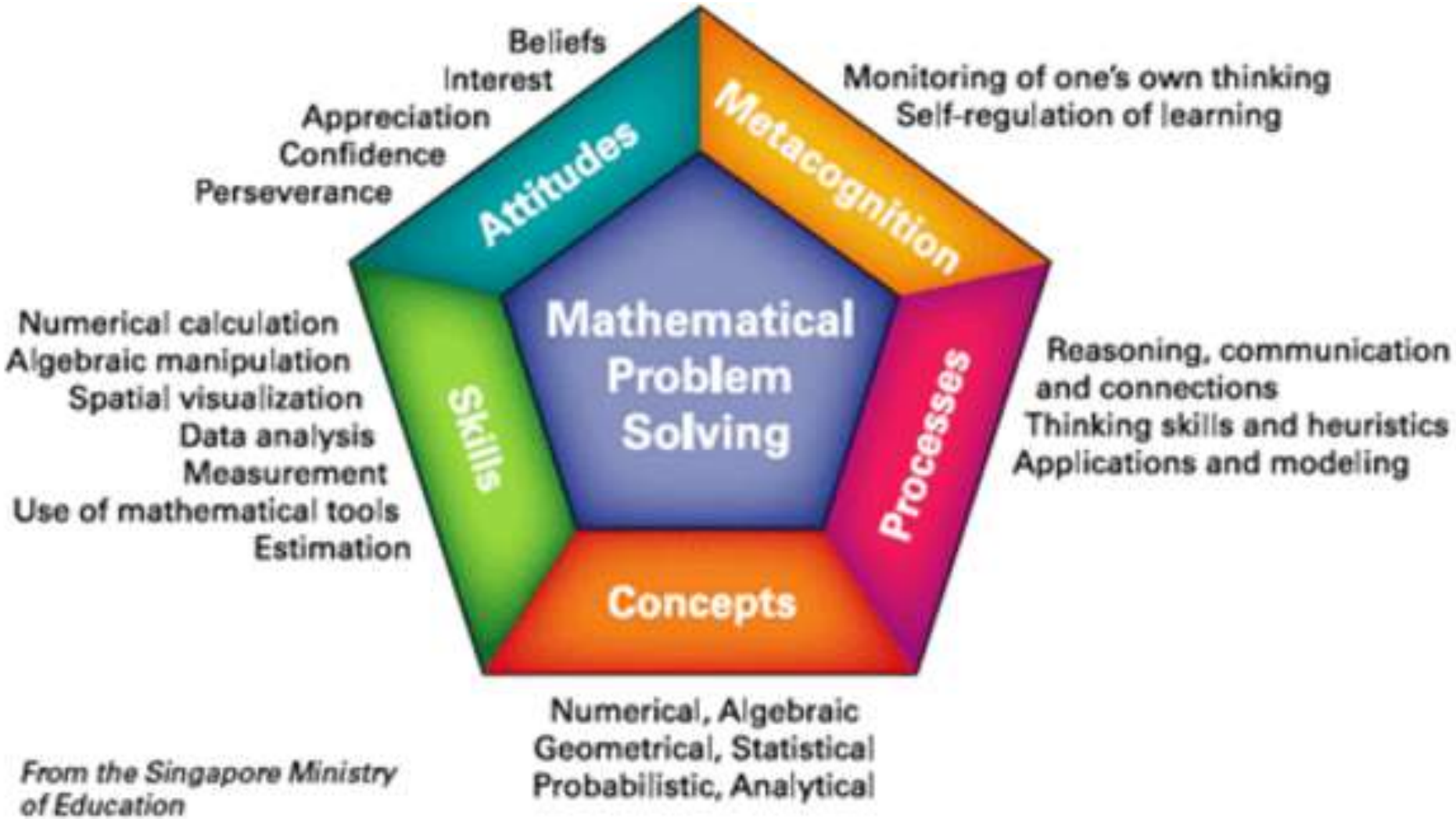
Math Workshop for Parents

Primary 6

Content

- MOE Primary Mathematics curriculum and key focus areas
- P6 Syllabus and Topics
- Math Lessons in Cedar Primary
- Supporting your child in learning Math
- Prelim / PSLE Examination Assessment Format

MOE Mathematics Framework



From the Singapore Ministry of Education

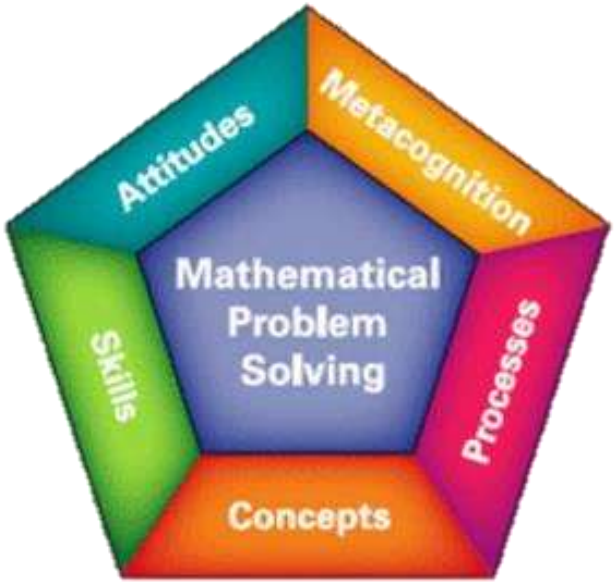
P6 Mathematics Curriculum

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

✓Follows a **spiral progression** in building up content across the levels

✓Develops **logical reasoning**, **communication**, **problem-solving** and **metacognitive skills**

✓Builds students' **confidence** and foster **interest** in Math, shaping their **attitude** towards the subject



Key Focus Areas

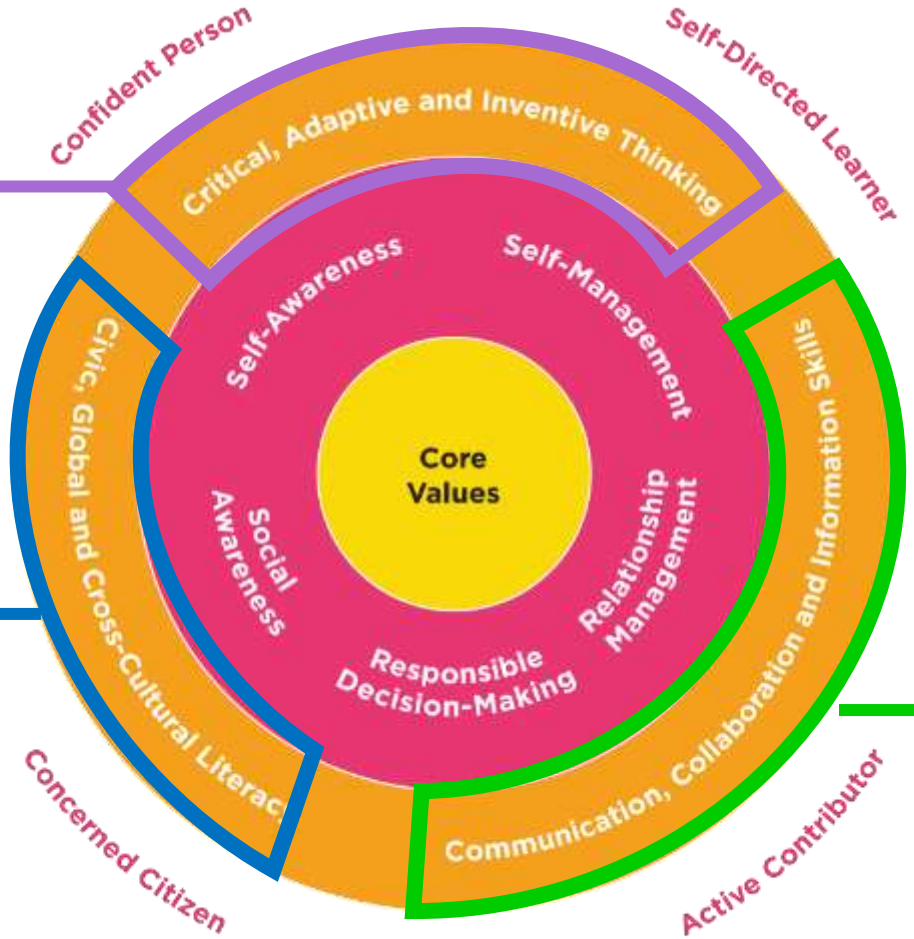
School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- ✓ Develop critical mathematical processes that support the development of **emerging 21st century competencies**.
- ✓ Develop **metacognition** to promote self-directed learning and reflection.

Emerging 21st Century Competencies

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- ✓ Solve word problems
- ✓ Make decisions
- ✓ Justify claims
- ✓ Derive different strategies



- ✓ Solve real-life problems such as savings, GST, postage rates

- ✓ Discuss / Share how to solve the problem
- ✓ Collaborate with one another
- ✓ Use Math vocabulary

Metacognition

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- ✓ Thinking about thinking
- ✓ Think about **why** a chosen approach is used to solve a problem
- ✓ Make **thinking audible or visible** by communicating what is being thought or how the problem is approached

Topics in the P5 Standard Math Syllabus

P5 Math Topics
Numbers up 10 million
Fraction and Division
Mixed Fractions
Decimals
Percentage
Ratio
Rate

P5 Math Topics
Area of Triangle
Volume of Cube and Cuboid
Angles
Triangles
Parallelogram, Rhombus and Trapezium
Average of a Set of Data

Mathematics Syllabus

Spiral Curriculum

Source : https://www.moe.gov.sg/-/media/files/primary/mathematics_syllabus_primary_1_to_6.ashx

Topics in the P6 Standard Math Syllabus

P6 Math Topics
Algebra
Fractions
Ratio
Percentage
Area and Circumference of Circles

P6 Math Topics
Volume of Cube and Cuboid
Angles in Geometric Figures
Pie Charts
Speed
Nets

Mathematics Syllabus

Spiral Curriculum

Source : https://www.moe.gov.sg/-/media/files/primary/mathematics_syllabus_primary_1_to_6.ashx

Topics in the P5 Foundation Math Syllabus

P5 Foundation Math Topics
Numbers up 10 million
Factors and Multiples
Fractions
Mixed Numbers
Decimals
Rate and Speed
Time

P5 Foundation Math Topics
Area and Perimeter
Volume of Cube and Cuboid
Perpendicular and Parallel Lines
Angles
Rectangle and Square
Tables, Bar Graphs and Line Graphs

Mathematics Syllabus

Spiral Curriculum

Topics in the P6 Foundation Math Syllabus

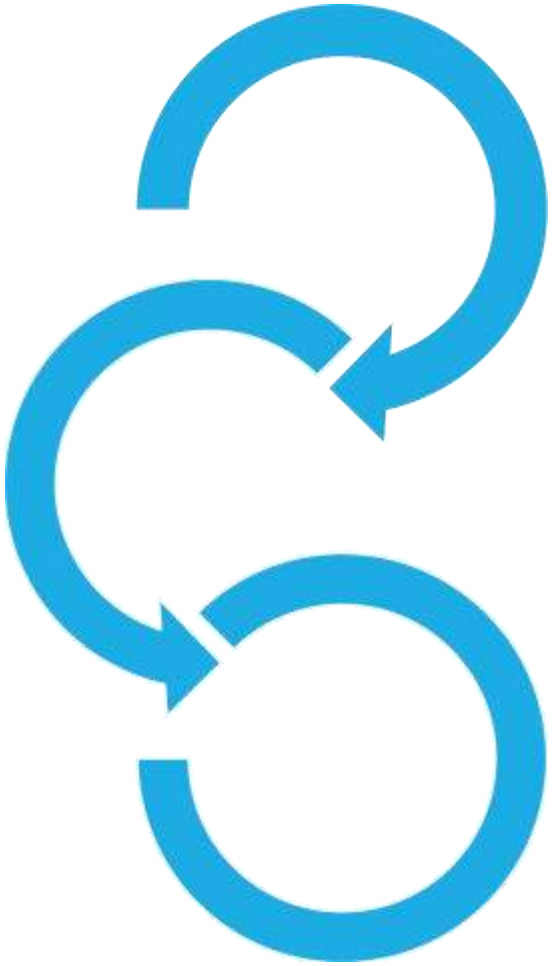
P6 Foundation Math Topics
Fraction and Division
Decimals
Percentage
Area and Perimeter
Average of a Set of Data
Pie-Charts
Volume of Cube and Cuboid
Rectangle, Square and Triangle

Mathematics Syllabus

Spiral Curriculum

Math Lessons in Cedar

Gradual Release of Responsibility



Teacher Demonstrates

Teacher/Students Do Together

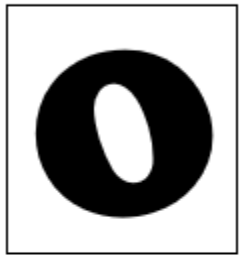
Students Do Together

Students Try on Their Own (Apply)

4 Steps to Problem Solving

STUDY the problem

- Read the problem and underline the key information
- What do I know? What do I need to find? Can I retell the problem in my own words?



ORGANISE details and think of a plan

- Look at the information given and come up with a plan
- How would I solve this problem? Which heuristic can I use? Have I come across a similar problem before?

ACT out the plan

- Solve the problem by carrying out the plan
- Are my equations clearly and systematically written? Is there another way to solve the problem if my plan does not work?

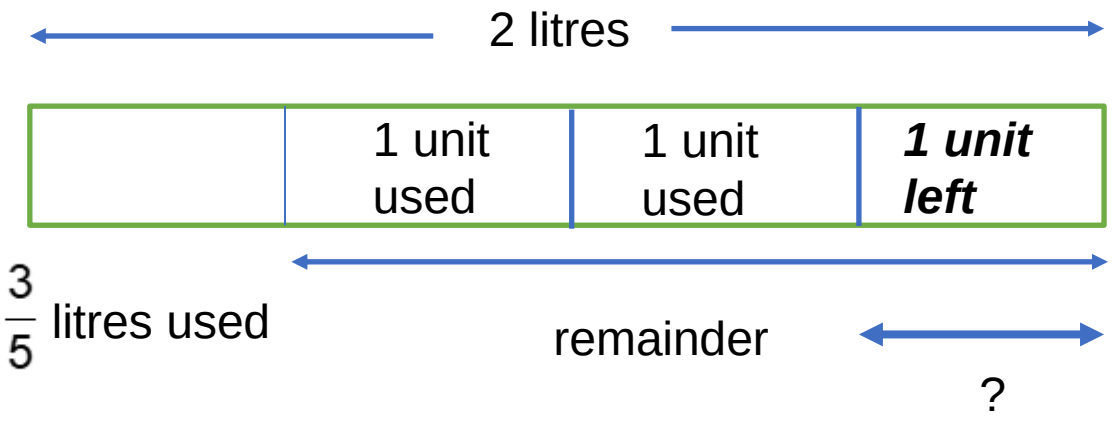
REFLECT on your solution

- Check my work
- Does my answer make sense? Is my answer reasonable? Are the correct units written? Is there an alternative method?

Method 1

4 Steps to Problem Solving

Mdm Ong bought 2 litres of washing liquid and used $\frac{3}{5}$ litres in the first week. Then she used $\frac{2}{3}$ of the remainder in the second week. How much of the washing liquid was left?



$2 - \frac{3}{5} = \frac{7}{5}$ *litres* (remainder)

$\frac{1}{3} \times \frac{7}{5} = \frac{\mathbf{7}}{\mathbf{15}}$ ***litres*** (Ans)

S — **STUDY the problem**
- Read the problem and highlight the key information
- What do I know? What do I need to find out? Can I retell the problem in my own words?

O — **ORGANISE details and think of a plan**
- Look at the information given and come up with a plan
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A — **ACT out the plan**
- Solve the problem by carrying out the plan
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R — **REFLECT on your solution**
- Check my work
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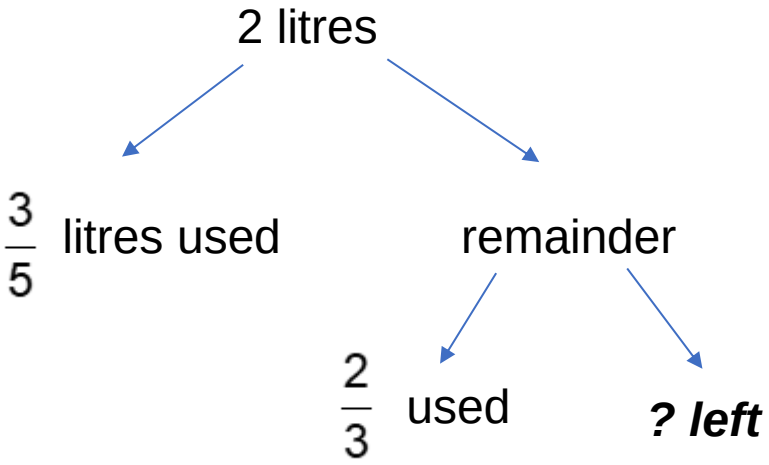
Method 2

4 Steps to Problem Solving

Mdm Ong bought 2 litres of washing liquid and used $\frac{3}{5}$ litres in the first week. Then she used $\frac{2}{3}$ of the remainder in the second week. How much of the washing liquid was left?



$$2 - \frac{3}{5} = \frac{7}{5} \textit{ litres (remainder)}$$

$$\frac{1}{3} \times \frac{7}{5} = \frac{\mathbf{7}}{\mathbf{15}} \boldsymbol{litres} \text{ (Ans)}$$

S — **STUDY the problem**
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Q1. Which stage of SOAR should the student have demonstrated?

5 boys share 2 pizzas equally. How much pizza does each boy get?

$5 \div 2 = \frac{5}{2}$

$= 2\frac{1}{2}$

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Q2. Which stage of SOAR should the student have demonstrated?

7. A bottle has some mango juice. The ratio of the volume of the mango juice to the volume of the bottle is 1 : 4. All the mango juice is poured into an empty container. The ratio of the volume of the container to the volume of the bottle is 3 : 1. Express the volume of mango juice as a fraction of the volume of the container.

(1) $\frac{1}{3}$

(2) $\frac{3}{4}$

(3) $\frac{4}{3}$

(4) $\frac{1}{12}$

VMJ : VB
1 : 4

C : VMJ
3 : 1

$\frac{1}{3}$

(1)

S **STUDY the problem**
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Q3. Which stage of SOAR should the student have demonstrated?

14. Alicia had $\frac{4}{5}$ kg of sugar in a container. She used $\frac{1}{3}$ of the sugar to bake a cake. How much sugar was left in the container?

$\frac{4}{5} \times \frac{3}{3} = \frac{12}{15}$ $\quad \frac{1}{3} \times \frac{5}{5} = \frac{5}{15}$

$\frac{12}{15} - \frac{5}{15} = \frac{7}{15}$

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S — **STUDY the problem**
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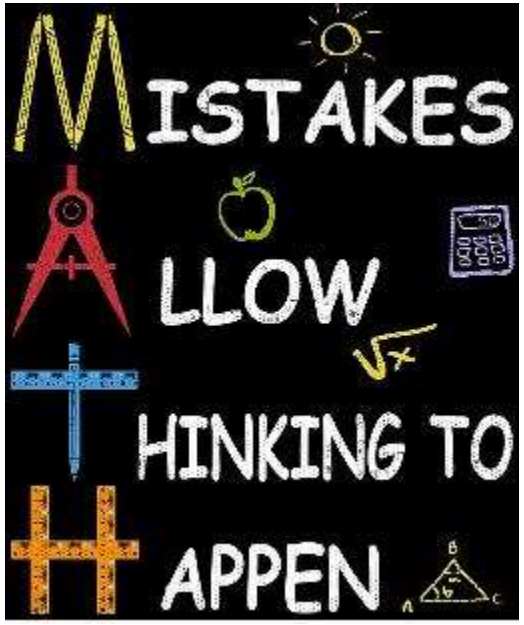
Common Errors

1. Not studying and reading the questions properly.
2. Missing equations in word problems
3. Incorrect equations in word problems
4. Missing or incorrect units in final answer

Supporting Your Child in Learning Math

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Attendance
Active Participation
Attitude
Sense of Urgency.Focus.Self-Discipline.Effort Determines Success
Achievement



B is for Belief
Every child can learn, given time and space

Create routines
Communicate & Encourage
Celebrate improvement

Prelim / PSLE - Format

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Primary 6 Standard Math	Paper 1 (45%) ***without use of a calculator , 1 hour*** Booklet A – 15 Multiple Choice Questions (20%) Booklet B – 15 Short Answer Questions (25%)
	Paper 2 (55%) ***with use of a calculator, 1.5 hour*** 5 Short Answer Questions (10%) 12 Long Answer Questions (45%)

Prelim / PSLE - Format

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Primary 6 Foundation Math	Paper 1 (50 marks) ***without use of a calculator, 1 hour*** Booklet A – 20 Multiple Choice Questions (30) Booklet B – 10 Short Answer Questions (20)
	Paper 2 (40 marks) ***with use of a calculator, 1 hour*** 10 Short Answer Questions (20) 6 Long Answer Questions (20)

CEDAR PRIMARY SCHOOL

EFFORT DETERMINES SUCCESS

Thank You